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Does Size Matter in Knowledge Management: A Comparison between Large Organizations and SMEs

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Abstract: This research intends to identify the differences and similarities of knowledge management in Large organizations and Small and Medium size enterprises (SMEs). Primary data were collected by interviewing five large businesses and ten SMEs. Besides the academic contribution to the field of knowledge management, this research will be able to provide applicable and practicable suggestions on the knowledge management practices to businesses in Australia.

Keywords: Knowledge Management, SMEs, Australia, Qualitative Methods, Content Analysis

I. Introduction

Knowledge management is not new. Human beings have been practicing knowledge management as early as 4,000 years ago when the earliest civilization evolved [44]. Knowledge management refers to a systematic and organizational specific framework to capture, acquire, organize, and communicate both tacit and explicit knowledge of employees so that other employees may utilize them to be more effective and productive in their work and maximize organization's knowledge [1] [11]. Knowledge management includes four knowledge processes: knowledge creation, knowledge storage, knowledge distribution, and knowledge application [1] [43].

Literature has defined knowledge management (KM) in a number of ways [5] [7] [8] [14] [22] [34]. For example, Carayannis [6, p. 219] suggests that knowledge management "can be viewed as a sociotechnical system of tacit and explicit business policies and practices. These are enabled by the strategic integration of information technology tools, business processes, and intellectual, human, and social capital". Wiig [43, p. 458] defines knowledge management as "the field of deliberately and systematically analysing, synthesizing, assessing, and implementing knowledge related changes to attain a set of objectives". Sveiby [38, http://www.sveiby.com/articles/IntellectualCapital.html) describes knowledge management as "the art of creating value and form an organization's intangible assets". Sarvary [33, p. 95) defines knowledge management as "a business process". It is the process through which firms create and use their institutional or collective knowledge. Saffady (1998, p. 3) views knowledge management as "the systematic, effective management and utilization of an organization's knowledge resources". Malhotra [21], http://www.brint.com/interview/maeil.htm) defines knowledge management as "Knowledge Management caters to the critical issues of organizational adaption, survival and competence in face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seek synergistic combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings". Amercian Productivity & Quality Center [3, p. 7] views knowledge management as "the strategies and processes of identifying, capturing, and leveraging knowledge to help the firm compete".

In this study, the definition by Ruggles [31] is adopted , which is as follows:

"KM is…. an approach to adding or creating value by more actively leveraging the know-how, experience, and judgment reside within and, in many cases, outside of an organization." [31, p. 80].

This definition highlights important elements of knowledge management. The "know-how" aspect of KM emphasizes the "explicit" knowledge, which can be easily captured and codified [5]. On the other hand the "experience" and "judgment" aspects of KM reflects the "tacit" or "implicit" knowledge, which is difficult to capture and formalize [5]. The definition also emphasizes that primary purpose of knowledge management is to add or create "value".

Based on the literature [2] [18] [26] [29] [30] [35], knowledge basically can be divided into two categories: tacit knowledge and explicit knowledge. Some common applications of tacit knowledge are problem solving, problem finding, and prediction & anticipation [18]. Tacit knowledge basically consists of two dimensions: cognitive and technical elements [26]. The cognitive dimension of tacit knowledge refers to "mental models", which assist human beings in interpreting and understanding the world around them; individuals' perspectives, beliefs, and opinions are

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some examples of tacit knowledge [26]. The technical element of tacit knowledge includes things such as know-how, crafts, and skills [26]. Tacit knowledge is personal and context-specific; therefore it is more difficult to formalize and communicate [26]. Contrasting to tacit knowledge's subjective nature, explicit knowledge is more objective and generally can be codified or documented in formal or systematic format [26] Information in the databases, library, and Internet are some examples of explicit knowledge. Tacit knowledge has much higher value than explicit knowledge since people always know more than they can tell [37, p. 34] [25]. Furthermore, in order to apply explicit knowledge in practices, it must be converted to the tacit knowledge [25]. For example, students have to understand the knowledge, i.e., concepts, definitions, theories, formulas, they learn in the classroom and books before they can apply them to interpret, understand, and solve the problem in reality.

A lot of research has been done on the knowledge management in large organizations. However the literature on the knowledge management in comparison between large businesses (more than 200 staff) and SMEs (less than 200 staff) is very limited. This research is aimed to address this gap. This research investigates the knowledge management practices in SMEs in Australia. This study addresses the following research questions:

(i) to identify significant factors of knowledge management in large and small & medium businesses

(ii) to identify the differences and similarities of these significant factors

II. The Operation of Field Study

II. 1 Qualitative Research Paradigm

The paradigm of the research is qualitative, in which field study has been used as the research method [28] [45]. The field study adopts a semi-structured interview approach to better understand the participants' views on knowledge management. The literature review provides the framework for developing and refining the interview questions. It is very common to get qualitative data through interviews. Evidence exists that the interviewing has been used as an effective tool to collect data for thousands of years [42]. Like any other research method, field study involves choosing a sample of companies using either random or non-random method [45]. The details of the field study research process are presented in the subsequent sections below.

II. 2 Sample

A convenience sampling procedure was undertaken to select companies who were willing to be included in the field study. It is noted that convenience sampling is frequently undertaken in business research [45]. Main selection criterion was that the companies must be involved in various stages of knowledge management. Five large businesses and ten small and medium size companies took part in the study. At least a key person in the company, who has the knowledge of knowledge management, was contacted for interview.

II. 3 Data Collection

Semi-structured interview technique was used as the primary vehicle to collect data. The interview plan followed the guidelines of Whiteley et al. [42] and Patton [28]. The final interviews was scheduled as per the convenience of the interviewees, so that there will be minimum disruptions and interruptions in their working schedules. A pre-interview session was conducted first via telephone, which provided each interviewee an idea about the interview process and gave them some food for thought. Each interview lasted for about one hour. With the permission of the interviewees, each interview was recorded using a micro-audio recorder. Each interview was transcribed the following day in order to reflect on the body language and other non-verbal cues fresh from memory.

II. 4 Data Analysis via Content Analysis Approach

One of the challenges in qualitative research is data analysis. A number of tools and techniques are available in the literature [23]. These tool(s) must be selected based on the objectives of the research. Since the research in this stage was more exploratory than confirmatory in nature, "content analysis"was chosen as a method in analyzing the interview transcripts [4]. Two-stage content analyses was carried out for data analysis. Stage one dealt with single interview transcripts, while stage two dealt with cross interview transcripts [23].

III. Results and Discussions

III. 1 Demographic Information

Table-1& 2 presents the demographic information on the companies involved in the field study. It is noted that among 10 SME participants (see Table-2) there are two community services clubs, tourism and hospitality service, two real estate services, two health services, two education providers and one IT firm. The size of the company varied from 7 staff to around 200. In the meant time, among five large business participants there are two government organizations and four private companies (one mineral resource, one consulting, one engineering and one software development). Size of the company varies from 200 staff to over 4000 staff. One private company and one public organization have knowledge manager or chief knowledge officer on board. All companies are involved in various stages of knowledge management Table-1& 2 also presents the interviewees' positions in their organizations.

III. 2 Significant Factors of Knowledge Management

Table-3 presents significant factors of knowledge management for both large and S&M businesses. The six significant factors of KM for SMEs, chosen by all ten companies, are: *"Competitive Pressure"*, *"CustomerDemand and Expectation"*, *"Top Management*

Support/ Leadership", *"Organizational Structure"*, and *"Organizational culture"*. The four significant factors for large businesses, chosen by all five companies, are: *"Organizational Culture"*, *"Organizational Structure"*, *"Top management support"*, and *"Benefits to individuals"*.

Table-3 Significant Factors of Knowledge Management

	SMEs	**Large Businesses**
External Factors	Competitive Pressure Customer Demand and Expectation	
Internal Factors	Top Management Support/ Leadership Organizational Structure Organizational culture	Organizational Culture Organizational Structure Top management support Benefits to individuals

IV. Interpretation and Discussion

IV. 1 External Factors

SMEs Participants of the field study felt that their companies' initiative on knowledge management have been ignited by the tough competition and intensive competitive pressure in the market place and challenges from customers, who are demanding more value-for-money and expecting better services. Organizations exist within an "open" environment where external influences such as changes in the marketplace influences internal operation [24] [41]. Through fostering collaborative practices and knowledge sharing, knowledge management facilitates the learning about the external environment [17] and the implementation of a successful change management program responding to the external environment [24]. The organizations are implementing knowledge management to learn and respond to their customers better. Through effective knowledge management programs, businesses is also able to provide more enhanced or/ and new products and services. Literature, such as Alavi & Leidner 1999 [1]; suggest that knowledge about customer and customers are most important knowledge domains for businesses. In the mean time, 3 out 5 participants from large organizations also indicated the importance of Competition and Customer Demand.

IV. 2 Internal Factors

Management Support

Management and leadership play critical roles in knowledge management [27], which is shared by both large and S&M businesses. Management provides vision and energy to stimulate and sustain effective knowledge management practices and systems. Leaders have direct impact on the organization's culture and its knowledge management approaches. Without management's commitment and emphasis on knowledge management, people won't take it seriously [12]. Those at the top of an organization should have to find the knowledge needs of the business. Simply investing money in IT only can produce more examples of KM failures and waste of investment. Leaders have to take account issues such as culture, structure, process, training and development. More attention should be given to people since businesses make profits through selling and effectively using their knowledge (tacit knowledge) [19] [36]. One important challenge for leaders is how they can embed knowledge into people's day-to-day work to help them do their jobs more effectively and efficiently [20]. Besides being role models for learning and knowledge sharing, leaders are responsible for creating a climate of trust where people can share knowledge with confidence [27]. All the interview participants express the view that support from top management, i.e., understanding the importance of knowledge management, commitment, leadership, is crucial for the success of knowledge management s in organization. For example, the leadership process in General Electric (GE) is all about sharing knowledge and creating knowledge. The top management in GE has focused on the importance of sharing knowledge. The knowledge sharing practice starts at the top [19].

Organizational Culture

All the participants (both large and S&M businesses) of the field study share the importance of organizational culture, which influences the effects of other factors (i.e., technology, management practices) of knowledge management practices [39], in contributing to the success of knowledge management. Organizational culture has been increasingly recognized as a major barrier to knowledge management [13] [15]. Organizations have to create an environment where people feel comfortable and are willing to share their knowledge. A knowledge-oriented culture challenges people to share knowledge throughout the organization [10] [24]. In the mean time, the benefits of knowledge management need to be demonstrated, and knowledge-sharing practices should be rewarded with tangible (i.e., financial rewards) and intangible (i.e., recognition) incentives [12].

Organizational Structure

There is a general agreement among SMEs and large business participants that organizational structure facilitates the knowledge sharing and cross-boundary collaboration. Organizations with flexible and organic structure are more likely to achieve the perceived benefits of knowledge management than those organizations that are rigid and bureaucratic [15]. Organizations with a rigid structure must be prepared to re-engineer its organizational structure to facilitate effective knowledge management.

Benefits to Individuals

The factor, *benefits to individuals*, is perhaps most important for the success of KM. "What's in it for me" is always a popular comment by individuals when any new venture is initiated in an organization. Individuals will not buy into knowledge management if they can't identify clear benefits in using it. Although this factor was highlighted by all large business participants, it was not considered important by all SME participants.

IV. 3 The Role of Business Size in Knowledge Management

Past research has reported the impact of size in the adoption of technology. For example, Thong [40] reports that organizational size is positively related to the organization's adoption decision of information systems. Dasgupta et al. [9] report that larger organizations are more likely to adopt information technology. Sarvary [33] suggests that large firms with large customer base tend to perceive a KMS more useful and have a better chance to apply KMS to build sustain competitive advantage.

The results of this study basically indicates basically there is no major difference in significant factors of KM between large and S&M businesses across different industry. So does the concept of KM. In today's highly competitive market environment, all the companies have to practice knowledge management and it is quite impossible to survive the severe competition without managing knowledge in the knowledge economy. Perhaps larger companies are practising knowledge management more consciously and systematically than smaller businesses. And the former could also use more or more advanced IT technologies to manage their knowledge.

V. Conclusions and Future Study

This paper presents a comparison study of knowledge management between large and small & medium businesses. In doing so it takes a qualitative field study approach. Fifteen companies took part in the study, which resulted in eight interviews with key person(s) in the companies. The participating companies were in various stages of KM practices. The interviews were transcribed by the researchers and the contents were analyzed thoroughly using a structured process.

Three variables identified to be significant for KM success in both SMEs and large businesses were: *"Organizational Structure"*, *"Organizational culture"*, *and "Top Management Support'*. These variables were mentioned by all the companies. Organizations planning to embark on KM or currently practicing some parts of KM should look into these variables carefully for successful implementation of KM.

This study contributes to the KM literature in the following ways. It used a qualitative research method to develop the factors, variables and comprehensive model. The research was thus exploratory in nature. It must be mentioned that most of the existing research in KM are quantitative in nature, i.e., hypothesis testing confirmatory type. The comprehensive model can be used to undertake further research and thus add value to the literature on knowledge management. The paper elaborated on how the combined model can be used to undertake further research and how it can also be used for practical applications in companies which are embarking on KM.

The researchers' future plan is to develop a model of knowledge management success and test the moderating impact of size and other factors such as industry sector, business models, etc. This part of the research will use a quantitative approach, which will test a number of hypotheses and the model itself.

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Table-1 Demographic Information of SMEs

	Com 1	**Com 2**	**Com 3**	**Com 4**	**Com 5**	**Com 6**	**Com 7**	**Com 8**	**Com 9**	**Com 10**
Nature of Business	IT (Software Development, sales and support)	Tourism and Hospitality Services	Aged Care services and community health services	Education	Community Services Club (Entertainment and Leisure)	Education	Real Estate Services	Community Services Club (Entertainment and Leisure)	Health Services	Real Estate Services
Size	7	37	88	119	190	14	14	110	14	60
Interview Participants' Position	Owner	CEO	HR Manager	Principal	PR Manager	General Manager	Owner	CEO	Office Admin Manager	Managing Director

Table-2 Demographic Information of Large Organizations

	Company 1	**Company 2**	**Company 3**	**Company 4**	**Company 5**
Nature of Business	Public Service (Resources preservation)	Mineral Resources	Consulting (International)	Public Service (Justice)	Engineering & Construction (Multinational)
Size	>2,00	593	4,500	>2,00	4000
Interview Participant's Position	Director of Strategic Development & Corporate Affairs	Managing Director	National Board Member & Partner	Change & Knowledge Manager	1. Director & Chief Financial Officer 2.Director of Business Development & Director of Corporate Affairs 3.Manager-Business Proposal